



w w w . c e i a . n e t



CEIA HEADQUARTERS



CEIA SpA HEADQUARTERS
Arezzo (ITALY)



ABOUT CEIA



- ✓ **CEIA** is an Industrial Company, founded in **1968**, focused on the design and manufacturing of **Electromagnetic Inspection Systems**
- ✓ **R&D, Engineering** and **Production** activities are performed **entirely in-house**
- ✓ **CEIA provides a worldwide assistance network** as well as training programs for certification in the use and maintenance of its equipment
- ✓ **6 CEIA Companies** and **140 Authorized Distributors**

CEIA COMPANIES



CEIA S.p.A., Arezzo (Italy)



CEIA S.p.A., Vicenza (Italy)



CEIA USA Ltd.,
Hudson, Ohio (USA)



CEIA Limited.
Alcester, Warks (UK)



CEIA International S.a.s.,
Paris (France)



CEIA GmbH, Wiesbaden
(Germany)



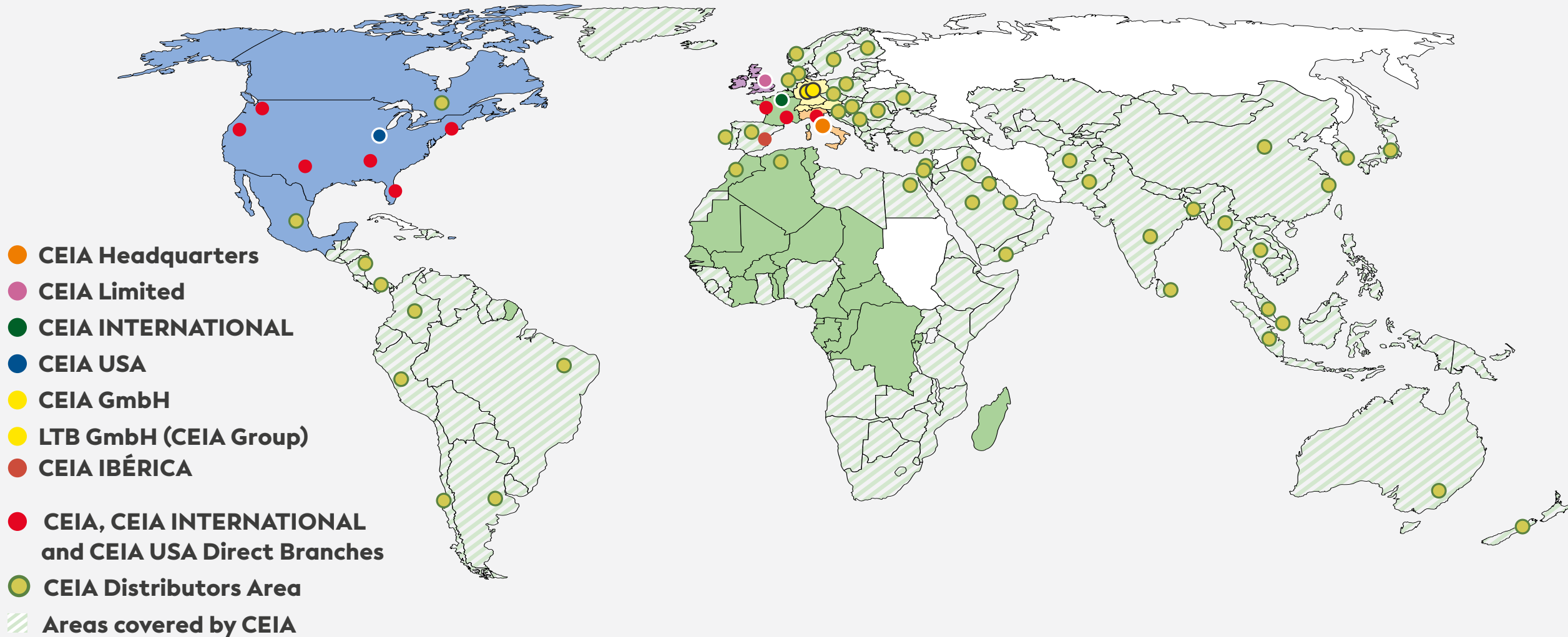
CEIA Ibérica S.L.,
Barcelona (Spain)

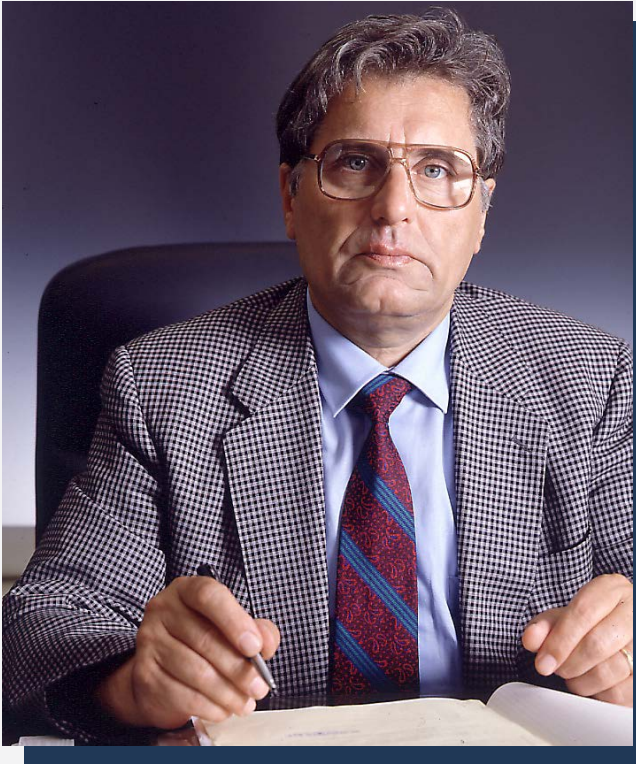


CEIA Induktion GmbH,
Weil der Stadt (Germany)



CEIA DISTRIBUTION AND ASSISTANCE NETWORK





*Giovanni Manneschi
(1931 - 2022)*

1962

- ▶ **The company founder**, driven by a passion for electromagnetic phenomena and for industrial radio engineering applications, **patents a solid state Metal Detector**
- ▶ The detector is **used in the textile industry** for detection of metal fragments accidentally present in fabrics



1962

- ▶ The first metal detector manufactured was able to **detect 5 mg of magnetic and non-magnetic metal** at the speed of **200m per minute**

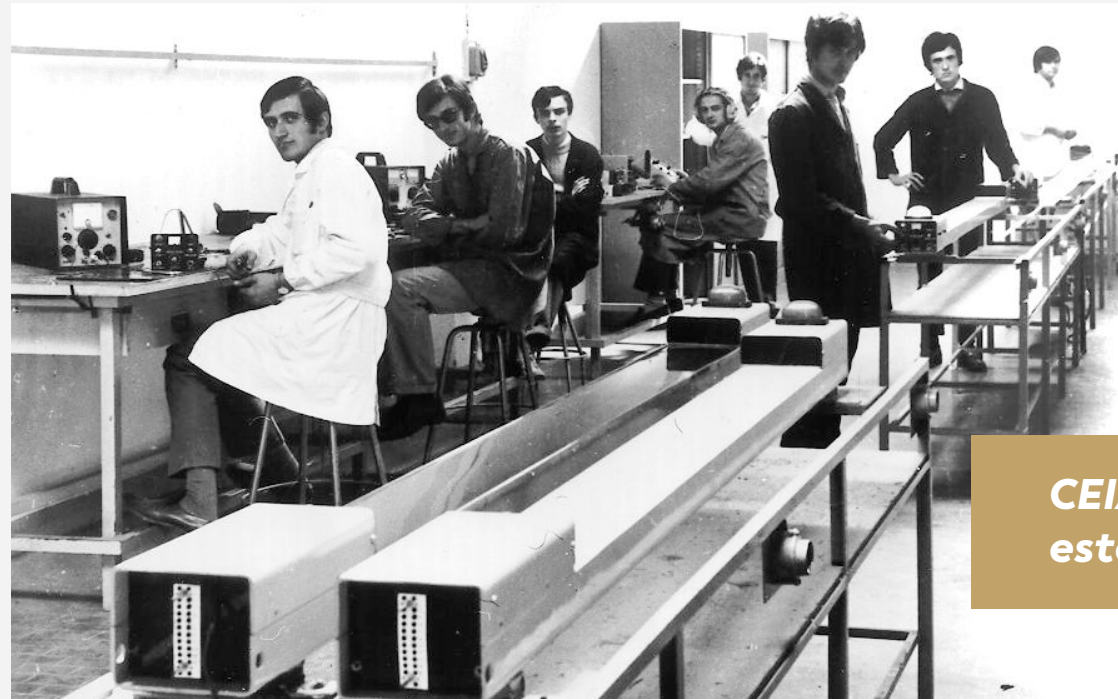


SENSITIVITY: 0.005 g S/S, Fe, NFe



1968

- **Incorporation of CEIA**, company specialising in designing and manufacturing of automation devices and Industrial Metal Detectors



Giovanni Manneschi shows the features of a test bench to the students of vocational school for electrotechnics

CEIA staff at its establishment

1968

- ▶ **CEIA** begins development and production of **industrial metal detectors** for food inspection, and **ultrasonic cleaning machines** for the gold and silversmith sectors.



**ULTRASONIC CLEANING
MACHINES**



INDUSTRIAL METAL DETECTORS

CEIA HISTORY



1975

- ▶ **The growing demand for security at entrances to airports and banks stimulates CEIA to start a major research and development program.**
- ▶ **This leads CEIA to become a major manufacturer of walk-through and portable Metal Detectors.**





CEIA starts production of the **new THS series of industrial Metal Detectors**, characterized by state-of-the-art performance and standard all-stainless-steel construction.



The company presents the **THS/PH21® Pharmaceutical Metal Detector series**, designed to fully comply with the latest FDA regulations.
Detection sensitivity starts at 0.2 mm metal size.



The company presents the **THS 21 Series with Multi-Spectrum Technology.**



The company presents the **THS/PH21N Metal Detection Systems**, the best metal detection solution for compliance with requirements on manufacturing, packing and storing food for human consumption.

1994

2003

2008

2009



The new **THS 21 FBB and MBB Conveyor Inspection Systems** revolutionize the food market with available **multi-spectrum technology**, maximum flexibility, enterprise class performance and breakthrough value.

2011



The **TE/SLD Digital Metal Detectors** are the **ideal means of protection for production lines** against accidental damage caused by fragments of metal which can enter the manufacturing process along with the material.

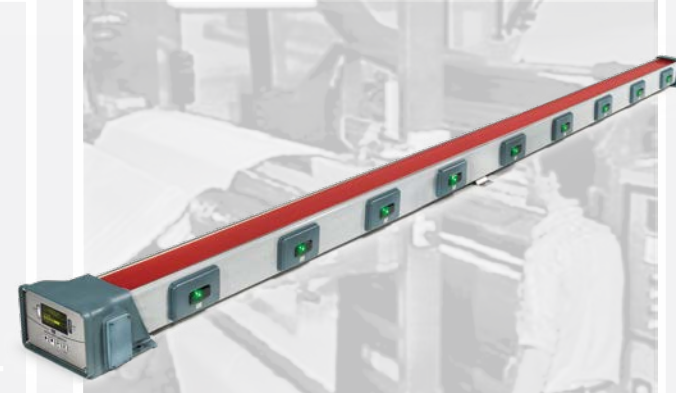
2012



The EMC **LACE** Laboratory is accredited according to the ISO/IEC 17025 standard.



2018



60 years after the first solid state textile metal detector, CEIA introduces the **new TE/MTZ model** which provides multi-zone indication of metal fragments position.

2022

1962

First solid-state
TE model

2022

New TE
multi-zone model



On the 60th anniversary of the first patent for the TE Textile Metal Detector, CEIA introduces the **new TE/MTZ** model which combines ultra-high sensitivity and multi-zone indication of metal fragments position.



COMPANY GENERAL INFORMATION



EXPERIENCE

- **OVER 50 YEARS** of experience in research and production of Metal Detectors
- Headquarters area: **58,500 m²**:
 - ▶ **428** employees
 - ▶ **185** highly qualified technicians in the production department
 - ▶ **75** R&D specialists and engineers

CERTIFICATIONS

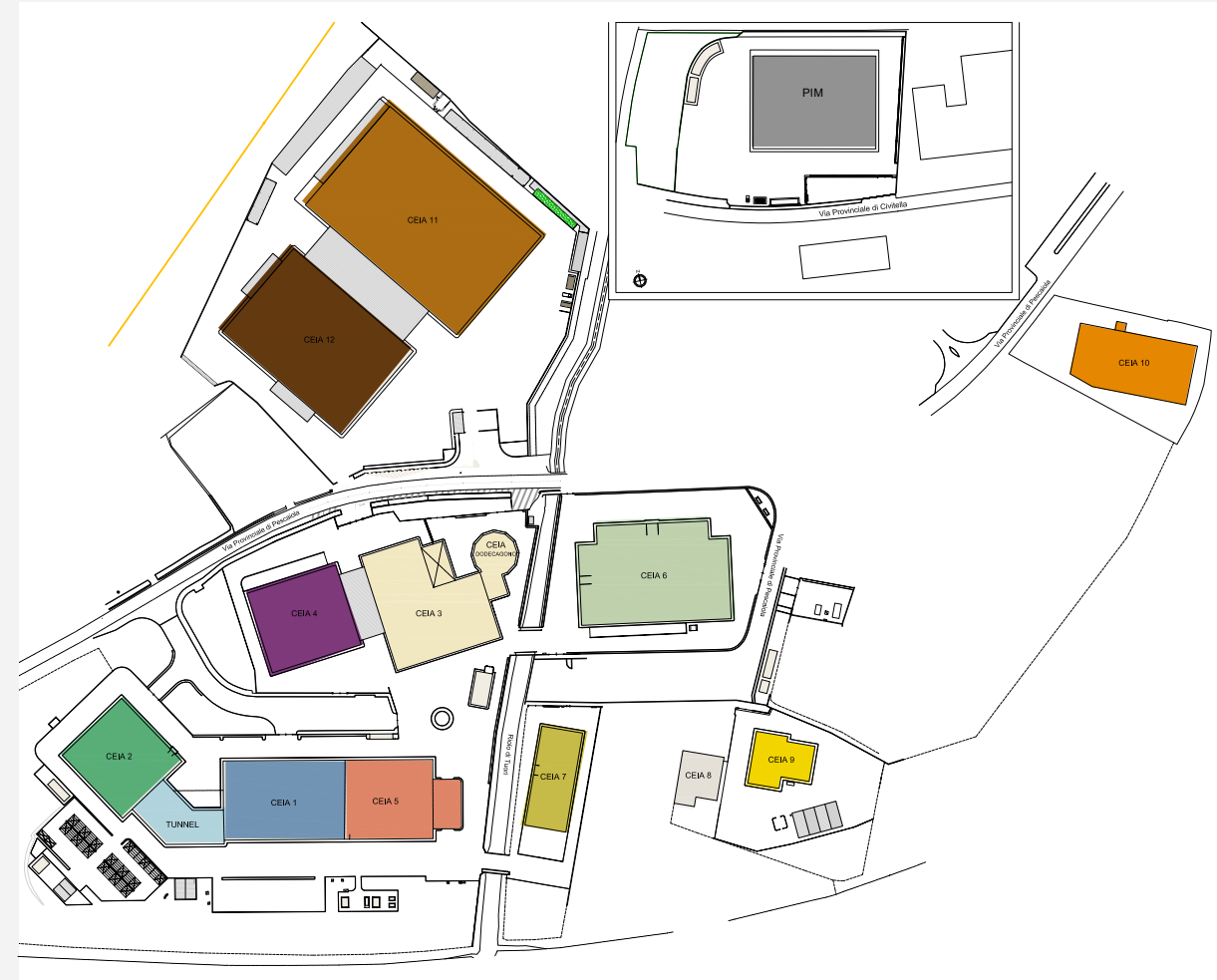
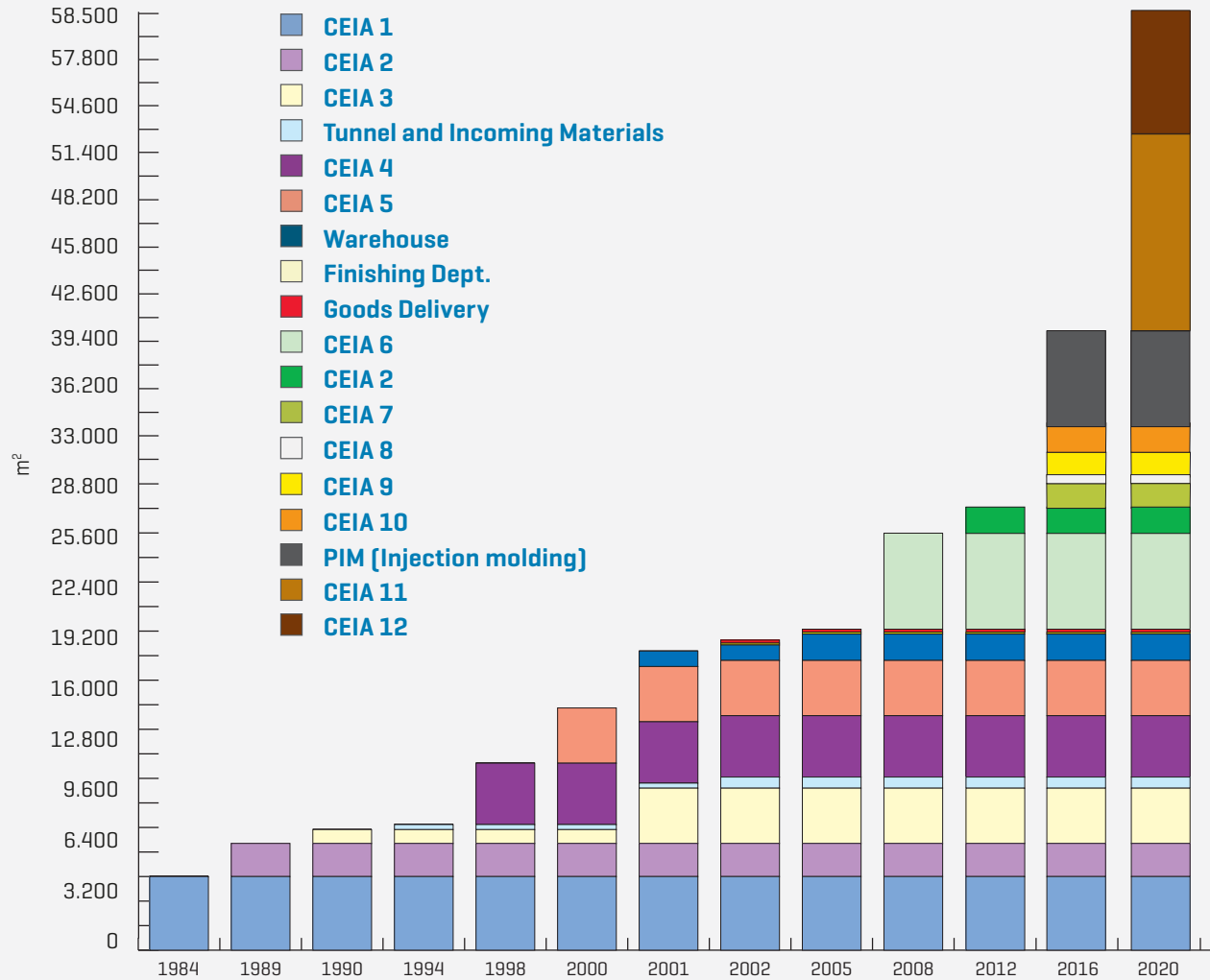
- **ISO 9001** Certification
- **ISO 17025** Certification (**LACE** Laboratory)
- **39 STAC** Certifications & **20 ECAC** Approvals for Security Aviation Screening Equipment

PATENTS

- **92 PATENTS** originating from research developed and implemented in the electromagnetic field

INSTALLATIONS

- **MORE THAN 500,000** Metal Detectors deployed worldwide
- **MORE THAN 30,000** Power Cube Generators installed





CEIA COMPLIANCE AND QUALITY CONTROL

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COMPLIANCE

CEIA LACE: ACCREDITED LABORATORY OF ELECTROMAGNETIC COMPATIBILITY

All CEIA equipment meets or exceeds local and international standards for electromagnetic emissions and immunity as well as electrical safety standards used worldwide.



RADIATED DISTURBANCE MEASUREMENTS



COMPLIANCE

CEIA LACE: ACCREDITED LABORATORY OF ELECTROMAGNETIC COMPATIBILITY



**HUMAN EXPOSURE TO
ELECTROMAGNETIC FIELDS
MEASUREMENTS**



SURGE IMMUNITY TEST



**ELECTROSTATIC DISCHARGE
IMMUNITY TEST**



**ENVIRONMENTAL TESTS, TEMPERATURE
AND RELATIVE HUMIDITY CONDITIONING**



COMPLIANCE

CEIA LACE: ACCREDITED LABORATORY OF ELECTROMAGNETIC COMPATIBILITY

2018

The LACE Laboratory is
accredited by Accredia
as Testing Laboratory
LAB N° 1714L and
meets the requirements
of the **standard**
ISO / IEC 17025:2005
(Accreditation
Certificate)
(Accredited Tests List)



Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual Recognition Agreements



Accreditation Certificate

CERTIFICATO DI ACCREDITAMENTO

ACCREDITAMENTO N.
ACCREDITATION N.

1714L REV. 00

EMESSO DA
ISSUED BY

DIPARTIMENTO LABORATORI DI PROVA

SI DICHIARA CHE
WE DECLARE THAT

C.E.I.A. Spa a socio unico
Sez. LACE Laboratorio di Compatibilità
Elettromagnetica

Sede/Headquarters:

- Strada Provinciale Pesciola 52-52/A - 52041 Civitella in Valdichiana AR

È CONFORME AI REQUISITI
DELLA NORMA

UNI CEI EN ISO/IEC 17025:2005

MEETS THE REQUIREMENTS
OF THE STANDARD

ISO/IEC 17025:2005

03



QUALITY CONTROL

CEIA's Quality System extends throughout the company, from the design stage through production, quality control and after-sales service.

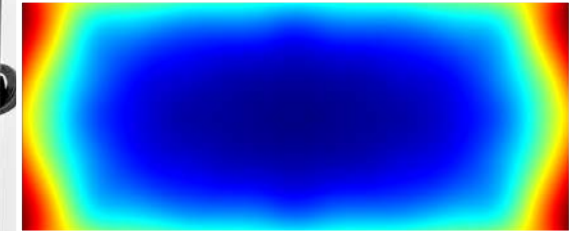
CEIA follows **ISO 9001 Standard** guidelines, for which it has been **certified since 1996**.





RESEARCH & TECHNOLOGY

NEARLY 20% OF CEIA'S STAFF IS FOCUSED ON RESEARCHING TOMORROW'S
THREAT DETECTION TECHNOLOGY USING ELECTROMAGNETICS



ROBOT MAPPING OF THE
MAGNETIC AND DETECTION
FIELD

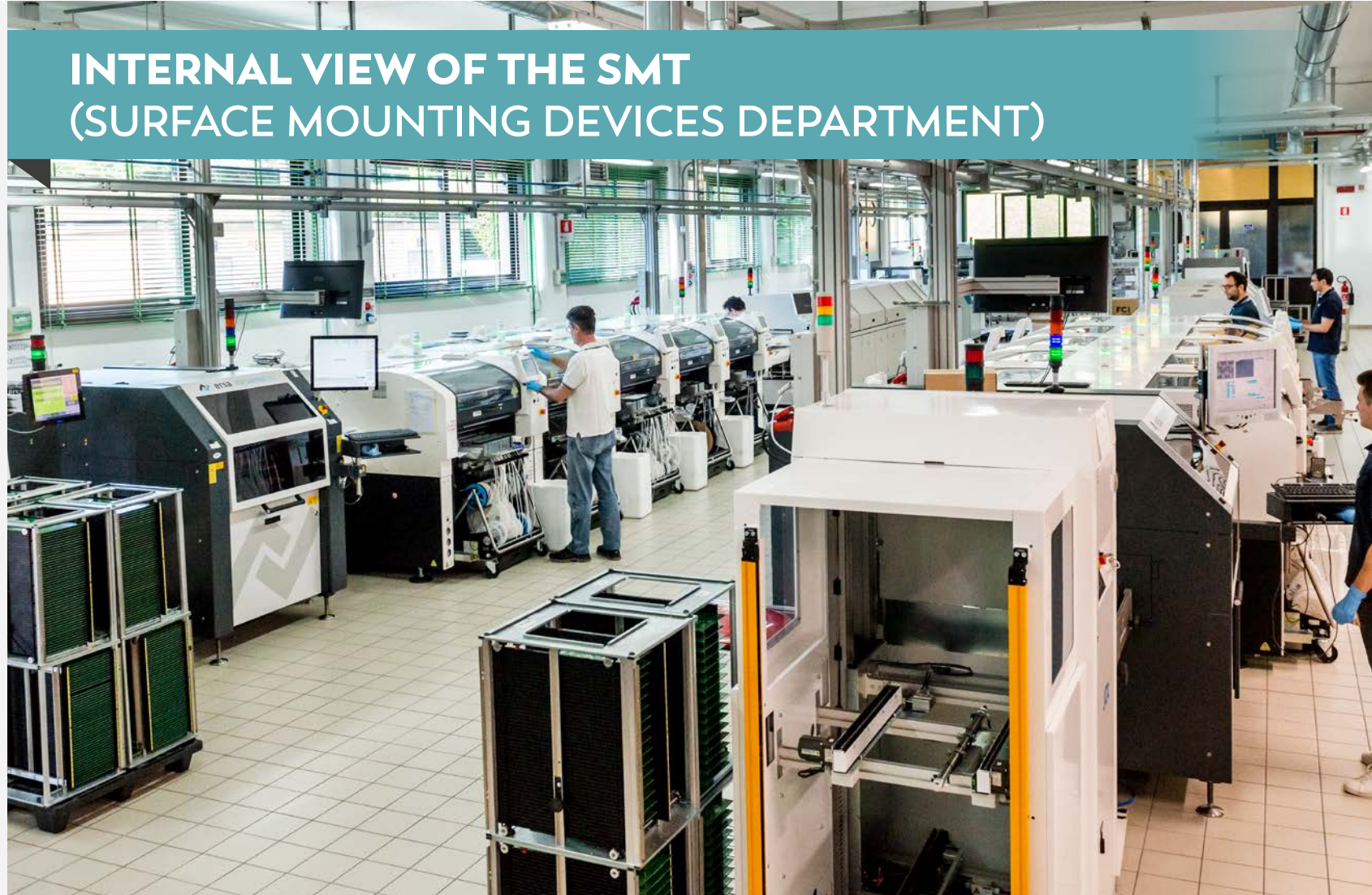
RESEARCH & TECHNOLOGY

AUTOMATIC PRODUCTION & SMT TECHNOLOGY

State of the Art
Digital Assembly
for consistent and
durable performance:

- Automatic **SMT** Production
- Real Time Quality Control
- Real Time Process Optimization

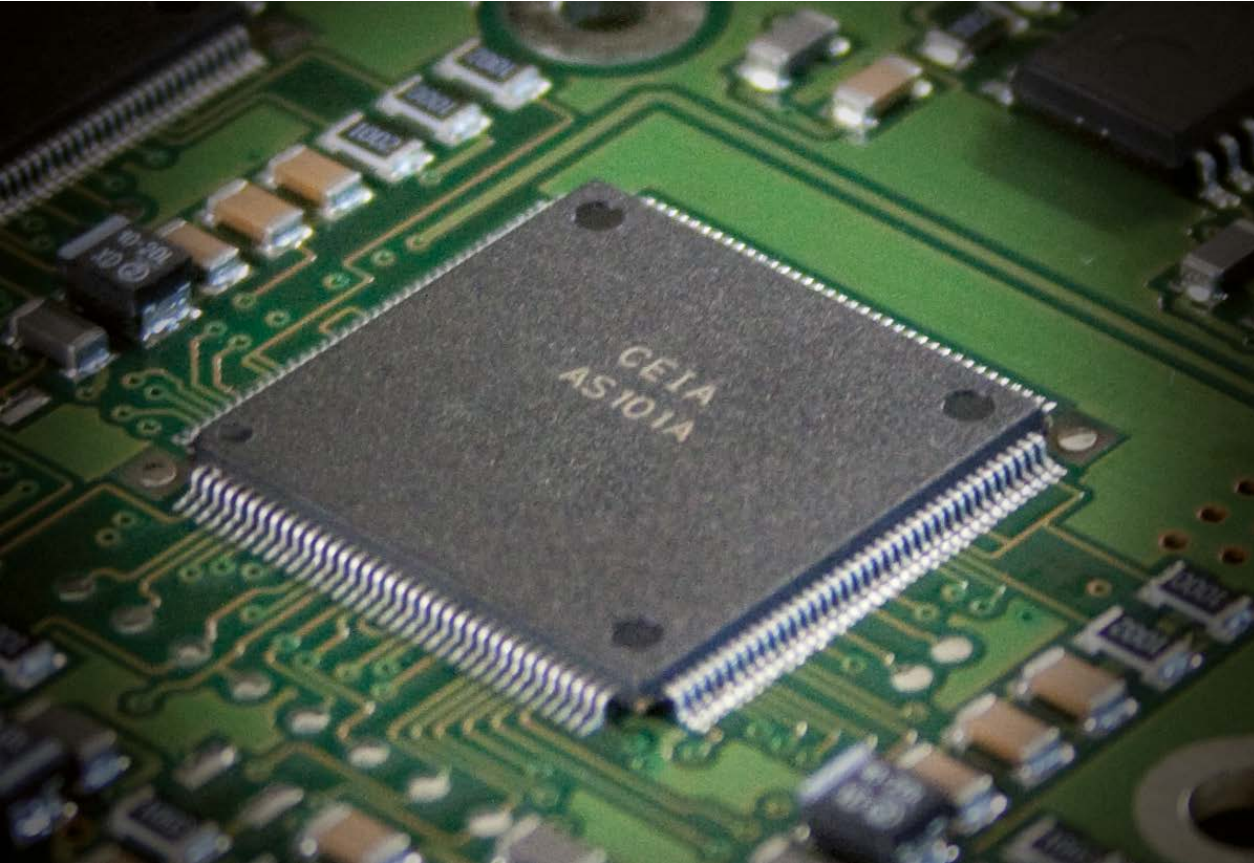
INTERNAL VIEW OF THE SMT (SURFACE MOUNTING DEVICES DEPARTMENT)



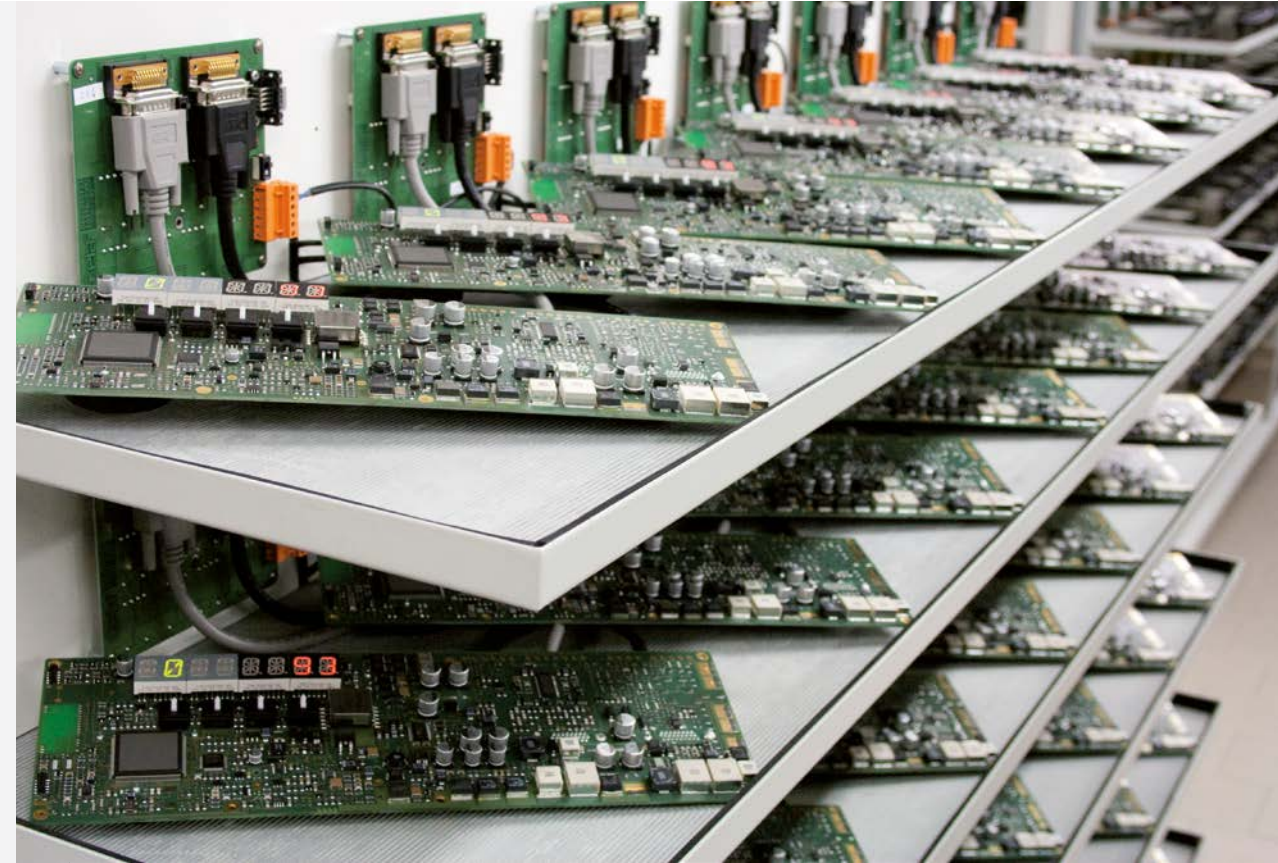


RESEARCH & TECHNOLOGY

AUTOMATIC PRODUCTION & SMT TECHNOLOGY



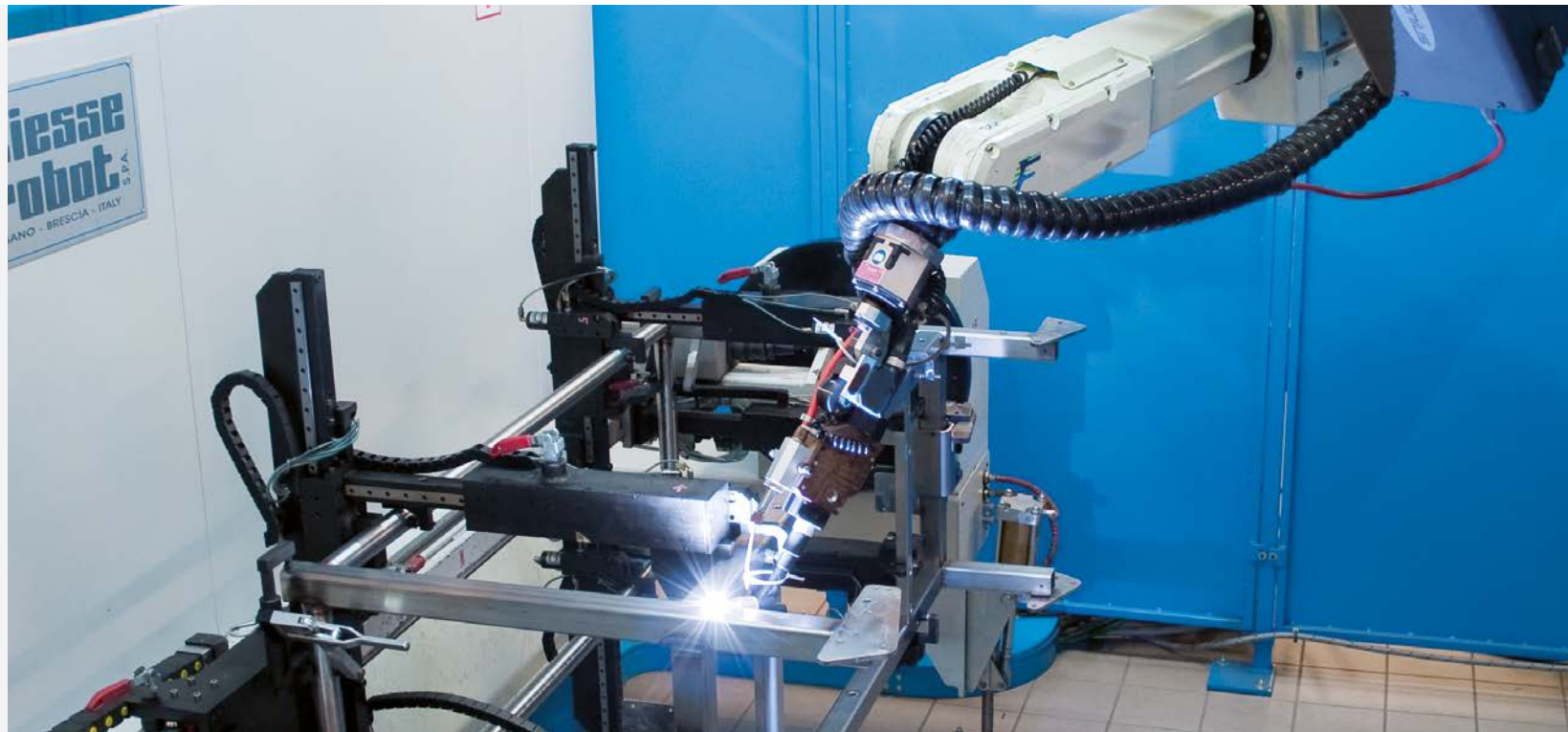
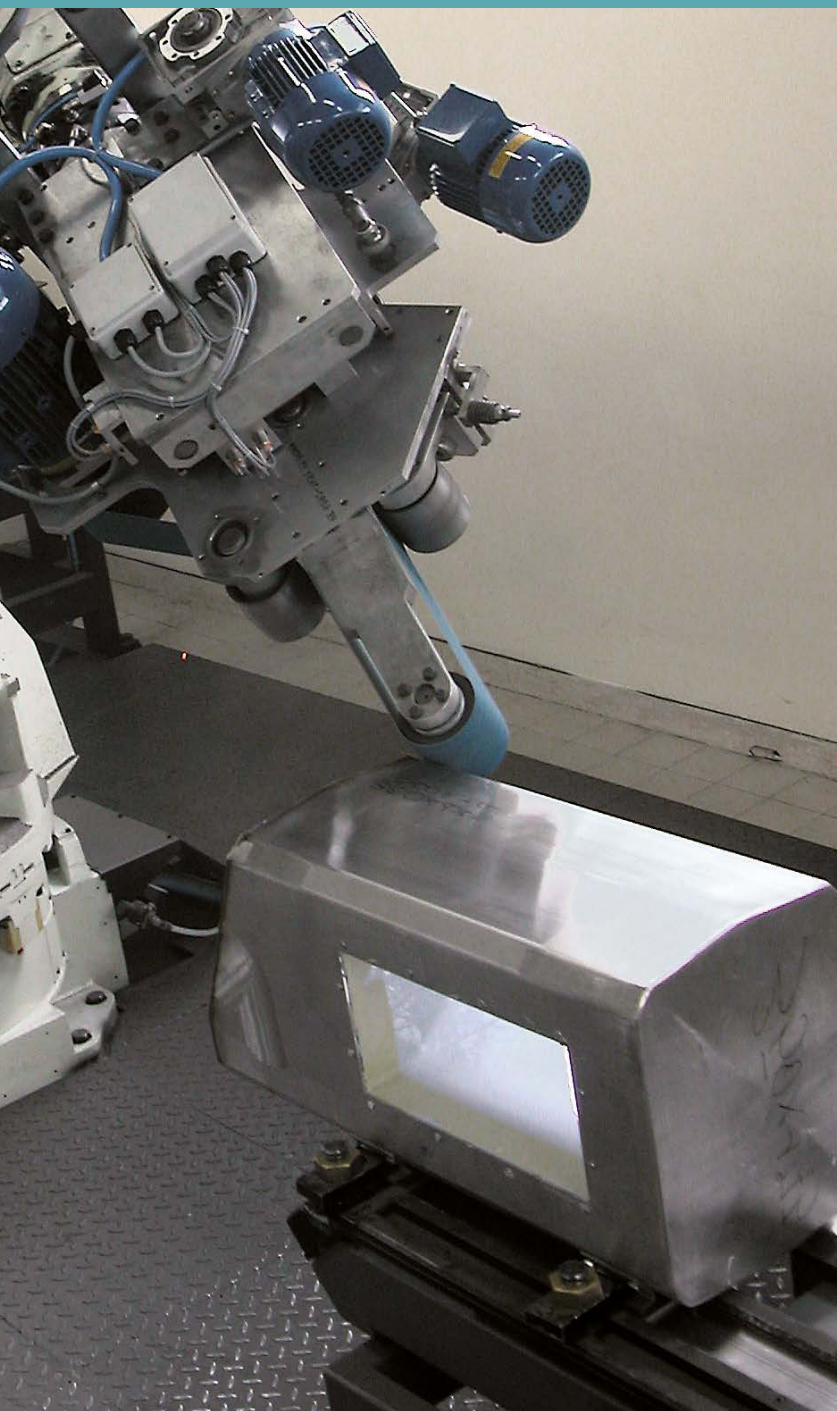
**CUSTOM DESIGNED DSP ANALYZERS
ALLOW UNPARALLELED DETECTION**



**ELECTRONIC BOARDS FUNCTIONAL
BURN-IN: 200 HOURS MINIMUM**

RESEARCH & TECHNOLOGY

AUTOMATED MECHANICAL PRODUCTION



AUTOMATED WELDING ROBOTS ensure high production speed together with very high reliability and repeatability

AUTOMATED FINISHING ROBOTS ensure high quality of surface treatment



AREAS OF SPECIALIZATION

SECURITY



INDUSTRIAL



GROUND SEARCH



INDUCTION





CEIA TEXTILE QUALITY CONTROL

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TEXTILE QUALITY CONTROL

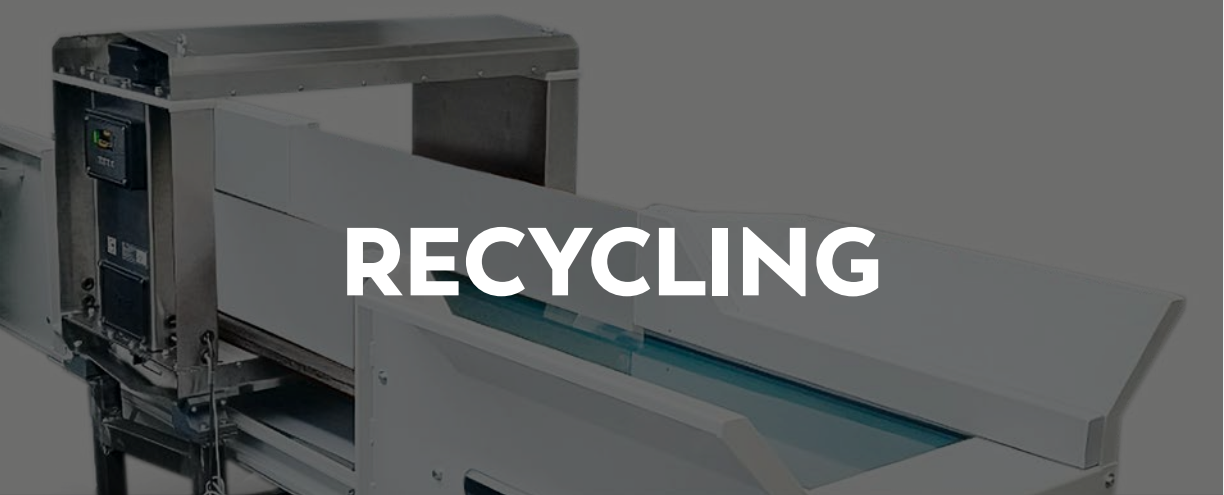
PRODUCTS LINES

A background image of industrial textile machinery, including large blue and white machines with various components and pipes.

TEXTILE

A background image of industrial machinery, specifically a large, dark, cylindrical component, possibly a part of a loom or finishing machine.

**WEAVING AND FINISHING
APPLICATIONS**

A background image of industrial machinery, showing a large, light-colored machine with a blue conveyor belt or chute.

RECYCLING

A background image of industrial machinery, showing a large, light-colored machine with a blue conveyor belt or chute, similar to the recycling image.

**GARMENTS MAKING
COMPANY**



TE ► ADVANCED DIGITAL BAR METAL DETECTOR

The **TE** Digital Metal Detectors are **the ideal means of protection for production lines** against accidental damage caused by fragments of metal which can enter the manufacturing process along with the material.



ULTRA HIGH
SENSITIVITY
TO ALL METALS

HIGHEST
IMMUNITY &
PROTECTION



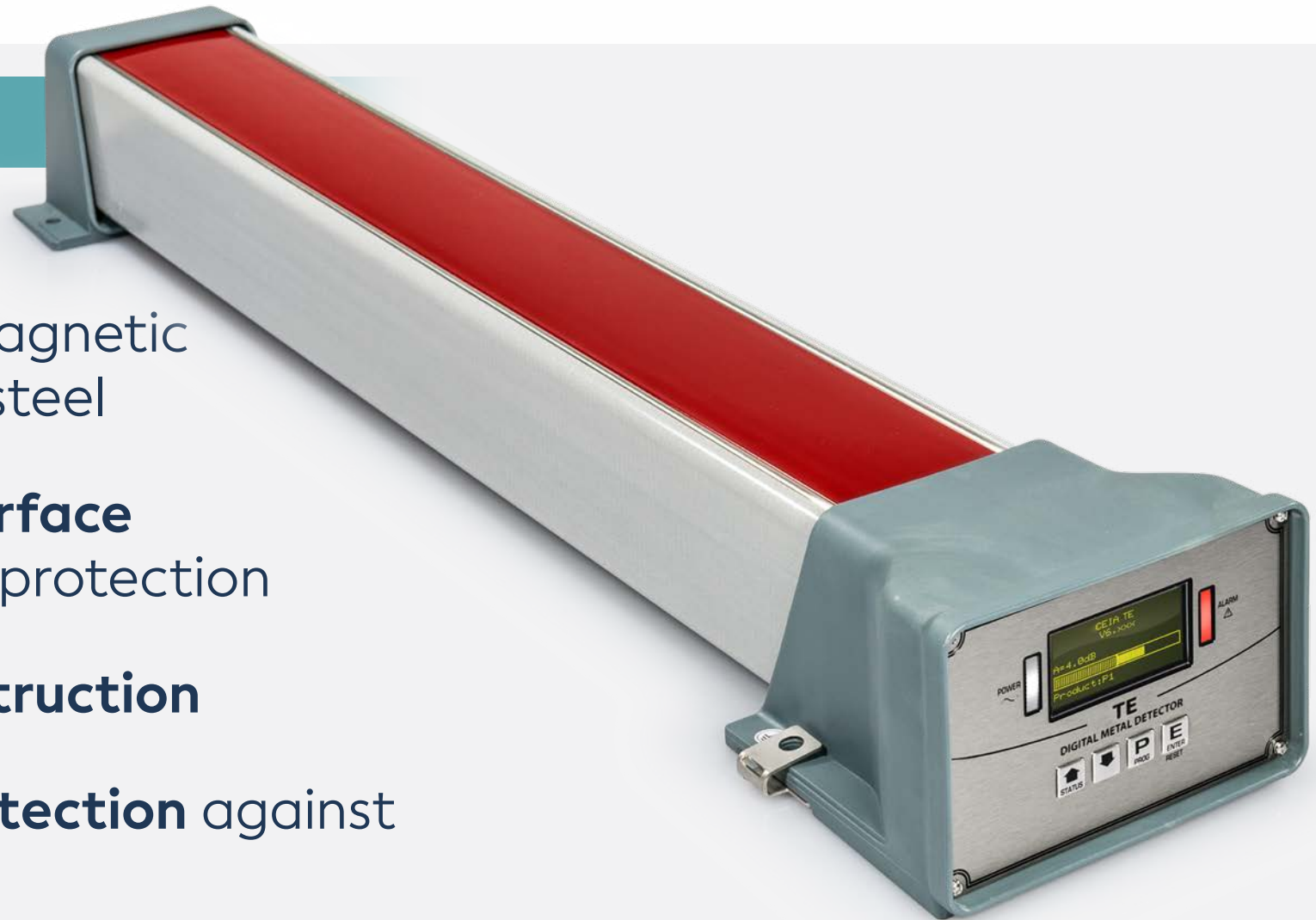
TE



ADVANCED DIGITAL BAR METAL DETECTOR

FEATURE HIGHLIGHTS

- **Ultra high Sensitivity**
to all magnetic and non-magnetic metals, including stainless steel
- **Unbreakable detection surface**
due to Stainless Steel Bars protection
- **Compact and robust construction**
- **Highest immunity and protection** against electrostatic discharges





TE



ADVANCED DIGITAL BAR METAL DETECTOR

FEATURE HIGHLIGHTS

- **Wide Detection Speed range**, from 1 up to 600 m/min
- **Complete selection range**: more than 50 models available
- **Easy installation and setting**
- **High product temperature working compliance**
- **Stand-alone and separate control unit** version (**RC**) available





INTERNAL DATA LOGGING

WITH DATA AND TIMESTAMP
FOR QUALITY CONTROL

FULLY DIGITAL PROGRAMMING

BT COMMUNICATION

FOR SETTING AND MAINTENANCE
THROUGH EXTERNAL PC



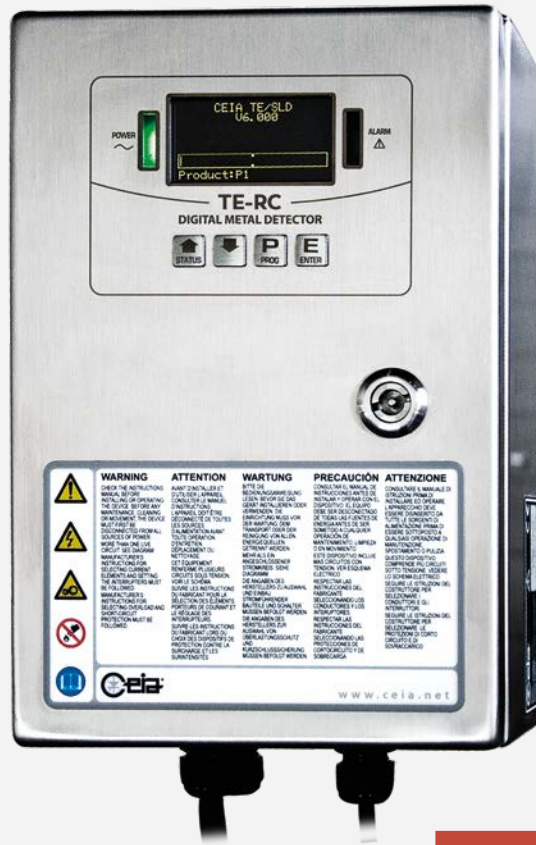
AUTOLEARN FUNCTION

FOR AUTOMATIC SETTING OF THE MAXIMUM
SENSITIVITY IN DRY AND WET CONDITIONS

BUILT-IN FUNCTION FOR
**AUTOMATIC MEASUREMENT
OF THE EXTERNAL INTERFERENCES**



TE-RC SEPARATE CONTROL UNIT VERSION (RC)



REMOTE CONTROL UNIT





TE



METAL DETECTOR FOR PLASTIC FILM APPLICATIONS

From the time they are produced, through their use and reuse, and to **their final recycling, recovery or disposal, plastic films** provide significant environmental benefits.



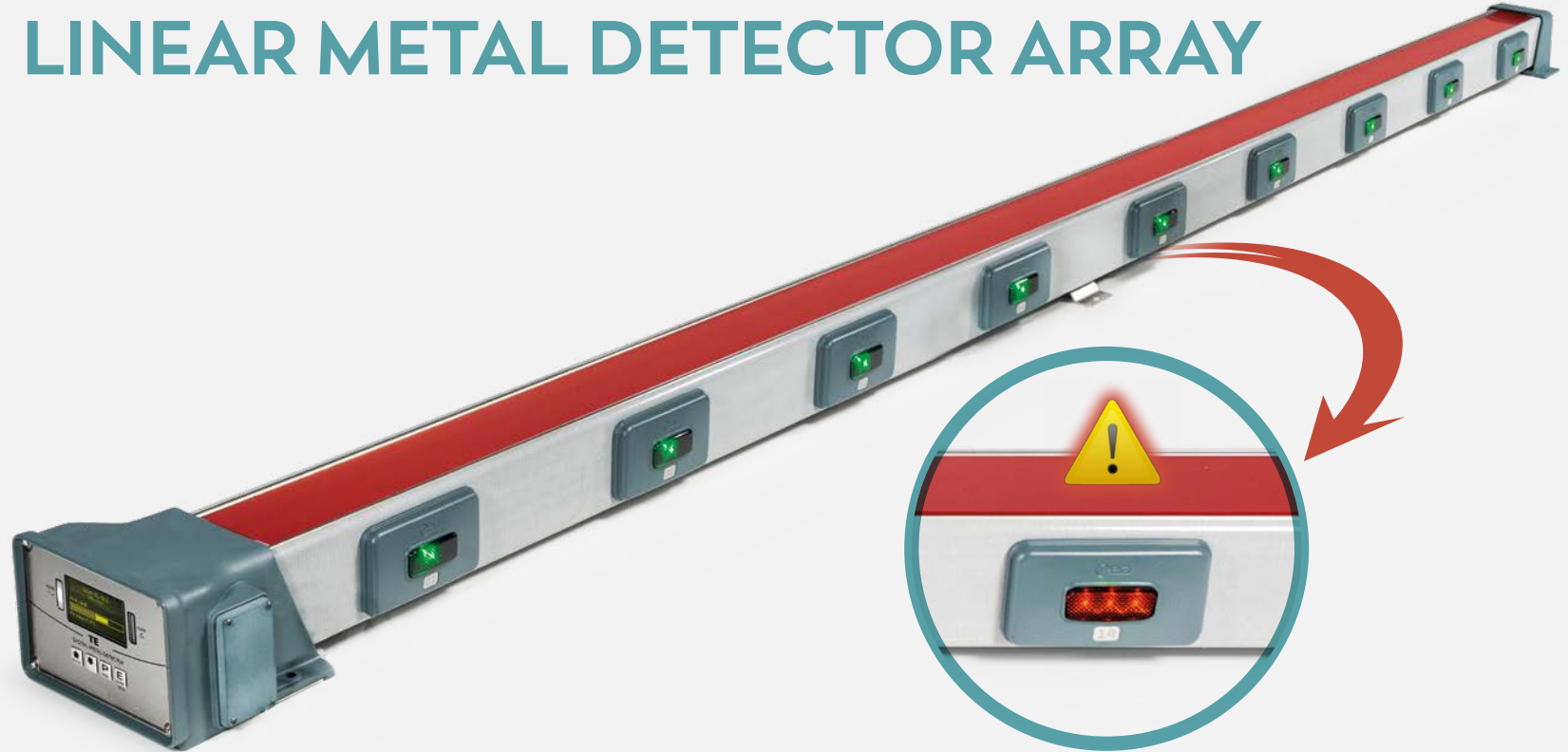


TE/MTZ

NEW

DIGITAL MULTI-ZONE LINEAR METAL DETECTOR ARRAY

CEIA TE/MTZ detector is a new member of the CEIA family of textile industrial detectors which combines and enhances the exceptional performance of the TE model with the ability to **identify and signal**, with a 300 mm pitch, the transit zone of the contaminating metal.



✓ **Multi-zone indication
of metal fragments position**



TE/MTZ

NEW

DIGITAL MULTI-ZONE LINEAR METAL DETECTOR ARRAY

- ✓ The TE/MTZ detector is available in several versions, with sensitive area width spanning from 1300 mm to 4500 mm
- ✓ The new detector complies with the requirements of Industry 4.0, allowing the increase of the plant productivity and the improvement of the product quality



COMPACT AND ROBUST
CONSTRUCTION

AUTOLEARN
FUNCTION

WIDE DETECTION
SPEED RANGE

MULTI-ZONE INDICATION OF METAL
FRAGMENTS POSITION



TE/MTZ

NEW

DIGITAL MULTI-ZONE LINEAR METAL DETECTOR ARRAY

TE/MTZ-LOGGER



- **MANAGEMENT OF ROLLS**
 - ▶ Start set
 - ▶ End
 - ▶ Data clear
- **REAL TIME VISUALIZATION OF THE FOLLOWING ROLL DATA**
 - ▶ Current Length
 - ▶ Number of Alarms on each section and zone
 - ▶ Amplitude and position of the last alarm.
- **DATA REPORT CREATION FOR EACH ROLL SECTION**
 - ▶ Roll Name
 - ▶ Section name
 - ▶ Roll length
 - ▶ Date and time of roll start and end
 - ▶ Position and amplitude of each alarm



THS/TT HIGH SENSITIVITY METAL DETECTOR



DIGITAL CONTROL PANEL



METAL DETECTOR ANTENNA



THS/TT HIGH SENSITIVITY METAL DETECTOR

The **THS/TT** Metal Detectors detects metal contaminants accidentally present in pipelines (i.e. in pneumatic lines), with **levels of sensitivity, immunity to interference** and **response speeds** designed to satisfy the strictest Quality Control requirements.





THS/TT ► KEY FEATURES

- **Ultra high Sensitivity** to all magnetic and non-magnetic metals, including stainless steel
- **Wide Detection Speed range**, from 1 m/s up to 50 m/s
- **Metal object speed and mass sensing**
- **Compact and robust construction**



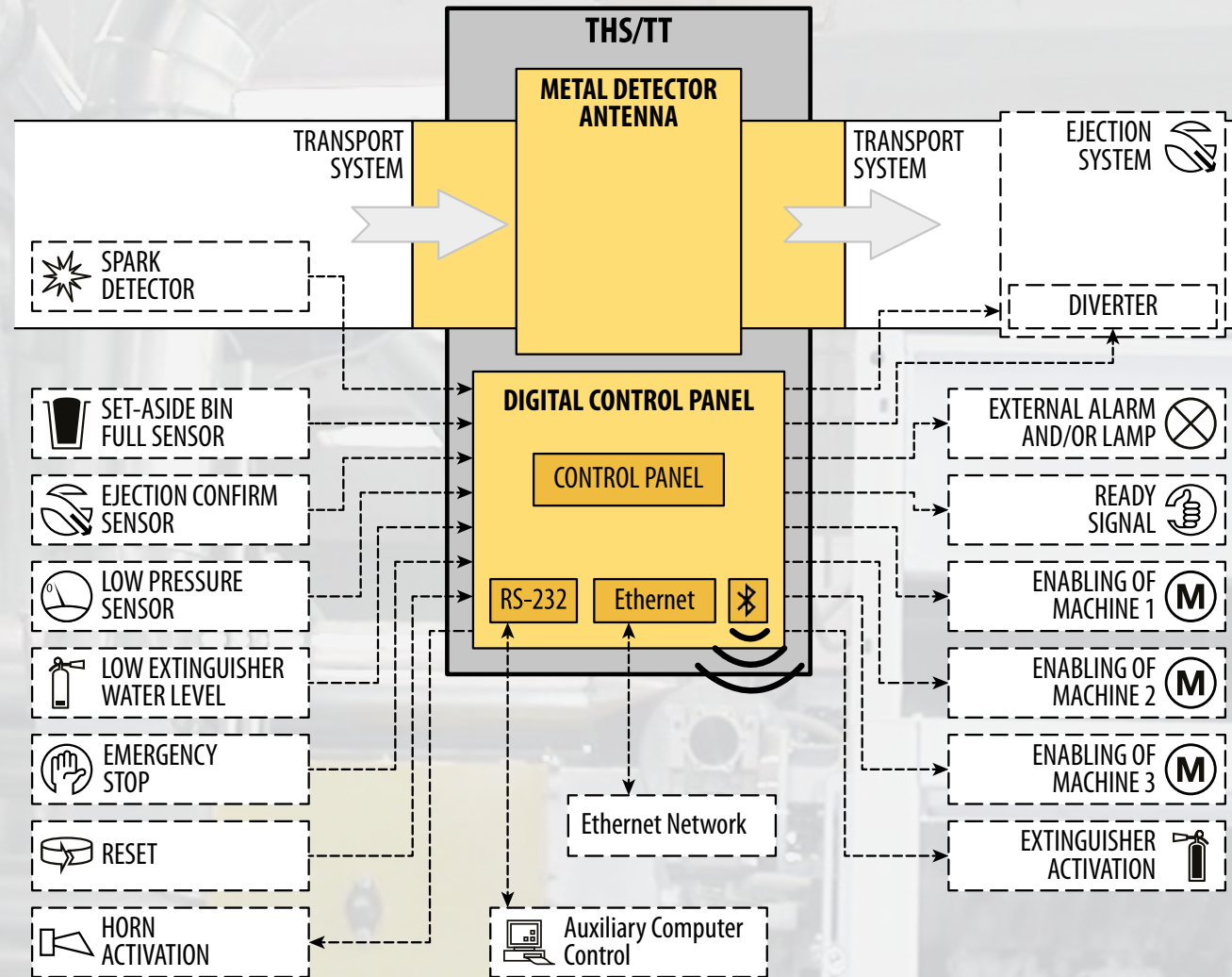


THS/TT ► KEY FEATURES

- High Immunity to environmental Interference
- Easy installation and setting
- Fully Digital Programming
- Bluetooth communication for setting and maintenance through external PC

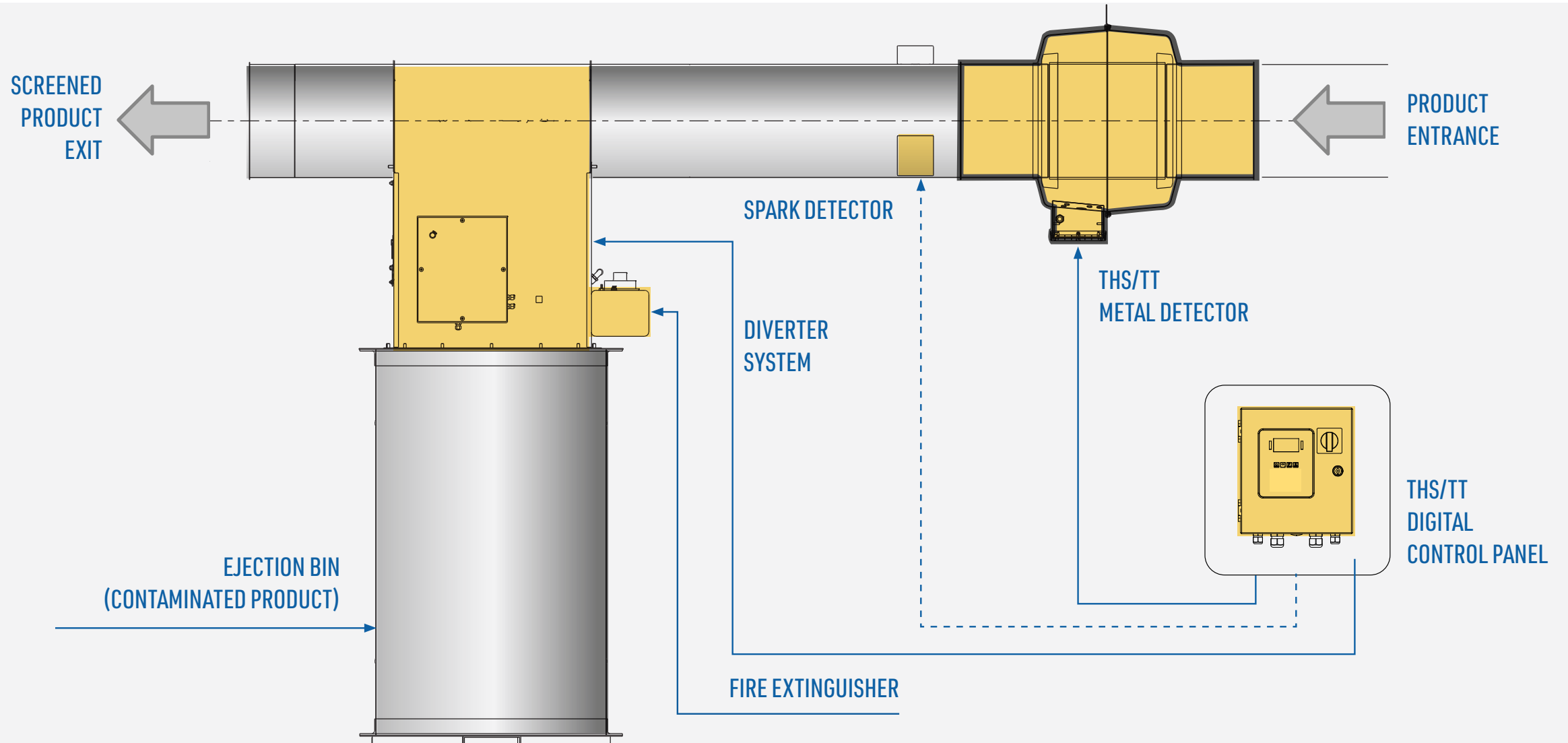


THS/TT FUNCTIONAL DIAGRAM





THS/TT PRINCIPLE OF APPLICATION

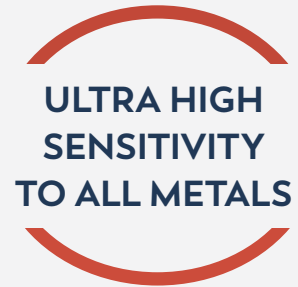




SDT



DIGITAL METAL DETECTOR FOR RECYCLING INDUSTRY



APPLICATIONS

- PAPER
- WOOD
- TEXTILE
- FOOD
- GARMENT
- PLASTIC
- RECYCLING
- RUBBER
- CHEMICAL
- RUBBER
- MINING
- CEMENT





SDT



DIGITAL METAL DETECTOR FOR RECYCLING INDUSTRY

FEATURE HIGHLIGHTS

- **Ultra high Sensitivity**
to all magnetic and non-magnetic metals, including stainless steel
- **Openable AISI 316 stainless steel**
construction system
- **Compact and robust construction**
- **High immunity** to environmental interference





SDT



DIGITAL METAL DETECTOR FOR RECYCLING INDUSTRY

FEATURE HIGHLIGHTS

- **Wide Detection Speed range,**
from 1 up to 600 m/min
- **Easy installation and setting**
on existing conveyor
without belt opening
- **Internal self-diagnosis system**
- **Easy to read, high-contrast
graphic display**





SDT



DIGITAL METAL DETECTOR FOR RECYCLING INDUSTRY





THS/21

► TEXTILE METAL DETECTOR

**WIDE DETECTION
SPEED RANGE:
from 1 to 250 m/min**



**CONVEYOR BELT
INTEGRATED
with Metal Detector**

**DETECTION
SENSITIVITY
COMPLIANT
with the Textile
Industry Standards**



THS/MN21

► NEEDLE SEARCH METAL DETECTOR

THS 21 CONVEYOR INSPECTION SYSTEMS

satisfy the most stringent requirements for functionality, compact construction, accuracy and reliability of response against accidental metal contamination in textile products.





THS/MN21

▶ NEEDLE SEARCH METAL DETECTOR

FEATURE HIGHLIGHTS

- **Very High Sensitivity**
to ferrous and to all magnetic metals
- **Digitally-adjustable belt speed**
- **AISI 316L** Stainless Steel construction
- **All parts completely reversible and modular**





THS/MS21

► WET WIPE DETECTION

FEATURE HIGHLIGHTS

- **Unique detection capability** of magnetic, non-magnetic and stainless steel metal contaminants
- **Automatic learning** and **tracking of product effect**
- Continuous auto-test function ensuring **maximum production safety**





THS/MS21

▶ PLASTIC FILM APPLICATIONS





PD140N

HAND HELD METAL FRAGMENT DETECTION





PD140N



COMPACT,
ELEGANT,
ROBUST AND
ERGONOMIC

EFFECTIVE
SENSITIVITY
TO ALL
METALS

FULL DIGITAL
DESIGN

Consistent
Performance
and Calibration-
Free Operations



THANK YOU FOR YOUR ATTENTION



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